

Wrawby St Mary's Computing Long Term Plan - NCCE Teach Computing Docs Cycle A 2025-26

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception Cycle A	Introduction to ipads – how to handle them, turn them on and off. QR codes – what they are and how to use them. Camera app to scan QR codes to link to a story to listen to. Headphones. Paint Sparkle – letter formation	Ipads available in continuous provision to use QR codes to link to stories, phonics games and maths games.				
		Paint Sparkle – letter formation, write name, write CVC words.	Follow instructions to move forwards, backwards and turn to the right and left. Introduction to beebots – what they are and what they can do. Explore the buttons on a beebot.	Camera app on ipad to take photos of their work in construction and dough Beebots - simple instructions to get from one place to another. Build up to sequencing two or three instructions together. Bee bot mats.	Camera app to take photos outside the classroom, e.g. signs of Spring	Introduction to laptops – what they are, what we use them for and how. Turn on and off. Insert login username and password (buddy up with a Year 1 child to gain confidence using the keyboard)
Preparing for: Bespoke to the School:	Preparing for taking photos in Summer 2 and preparation for being able to load an app to follow learning in the Year 1 Programming B unit which uses Scratch Junior. The stories selected and loaded using the QR codes will broaden the range of stories that the children engage with, including stories from different cultures which is important as the school is predominantly white British.	Digital painting in Year 1 which will require the use of the touchscreen laptops. It is important for the children at this stage to be able to feel the shape of the letter formation as some children will not be ready, or feel comfortable, holding a writing implement yet.	Preparing for Spring 2 where children will progress from programming single instructions to a short sequence. Children need to be able to physically move the robot before being able to move an onscreen robot.	Preparing for programming longer sequences in the Year 1 Programming A unit, moving a robot. Children need to be able to physically move the robot before being able to move an onscreen robot.	Preparation for using iPads to take photos in other curriculum areas throughout their future years at school. Some children will have explored their family mobile devices at home but may not have actually considered what they are taking photos of and how to make sure that the subject can be seen clearly in the screen shot. Some families will not have let their children explore mobile devices at home before.	Preparation for logging into laptops in preparation for the Year 1 units which require the use of a laptop. Many families have access to mobile devices at home but may not be familiar with using a physical keyboard, not an onscreen touchscreen keyboard.

Year 1 Cycle A	Y1 Computing systems and networks – Technology around us	Y1 Creating media – Digital painting <i>Link to Artist work – Mondrian; primary colours; self-portraits</i>	Y1 Programming A – Moving a robot	Y1 Data and information – Grouping data	Y1 Creating media – Digital writing	Y1 Programming B – Programming animations
Previous learning: Preparing for: Bespoke to the School:	Builds upon use of technology with the foundation stage. Digital resources within role play areas. Link to the History within the 2-year cycle teaching units where possible in the following term. Also introduces key parts of digital devices such as laptops and desktop computers. The school's context would indicate families have access to the digital world – therefore a separate e-safety programme is delivered half termly	Builds upon previous mark making and painting skills in the foundation stage. Also build upon the keyboard and mouse skills created in the tech around us unit Autumn 1. Link to Art within the 2-year cycle where possible eg study of an artist Georgia O'Keefe Preparing for later units using Paint packages e.g. Year 3 Connecting computers lesson 3. Creates another retrieval link and cross curricular link to other curricular subjects (Art).	Builds upon floor robots used in Foundation stage, instructional vocabulary and route planning using the big map. Preparing for future programming units through understanding the direction of forwards, backwards and left and right turns. Understanding of sequencing and debugging. Linked to the World of Work and the business links through emerging knowledge of how robots and machines are programmed through coding.	Builds upon grouping counting and comparing objects within the foundation year groups. Builds upon the mouse skills taught within previous units of this year. Prepares or the later units of spreadsheets and databases. In Y2 this is built upon further through the Pictograms units. Supporting maths on entry to primary school .	Builds upon initial mark marking and writing with meaning in the foundation stage. All future learning using digital technologies e.g. use of mouse and keyboard and entering and manipulation of the text created. Prepares for the Y3 Desktop publishing unit and Y6 Web development unit. The first steps into transferable skills within digital presentation for the world of work.	Builds upon floor robots used in Foundation stage, instructional vocabulary and route planning using the big map. Also builds upon NCCE Y1 Programming A Unit Moving a Robot. Preparing for future programming units through the introduction e.g. programming blocks and vocabulary in Scratch jnr. Linked to the World of Work and the business links through emerging knowledge of how robots and machines are programmed through coding.

Year 2/3 Cycle A	Y2 Data and information - Pictograms	Y2 Programming B - Quizzes	Y2 Creating media - Digital music <i>Link to science with animals</i>	Y3 Data - Branching Databases	Y3 Programming B – Events and actions in programs Link to relevant curriculum area	Y3 Creating media - Desktop Publishing Link to relevant curriculum area
Previous learning: Preparing for: Bespoke to the School:	Builds upon the Y1 Data and Information unit skills such as grouping data based on properties. Prepares for future NCCE units. Builds upon Y1 Number and place value and Y2 Data handling skills. Links with World of Work and education for a connected world through understanding self-image and identity, rules for a healthy lifestyle and knowledge of personal information and how to keep this safe.	Builds upon previous learning of algorithms from Y1 and also block coding skills covered in Y2 Programming A Robot Algorithms. Preparing for future Programming units in Y3. Links to the World of work and how coding is used in industry and within STEM.	Builds upon the vocabulary and skills from previous music lessons along with experiences of making choices on a digital device. Prepares children for sequencing sounds unit in Y4 and prepares for further learning in music. School spiral curriculum is based on the science of learning principles. Retrieval from music and then build upon through Y3 units.	Builds upon children's K & U from KS1 'Grouping Data' unit and where appropriate has been altered to include knowledge and understanding gained in Science about Plants and Rocks. Prepares for future learning in Y5 within the Flat File Databases unit as well as transference of skills within maths and science. The unit covers core concepts that are transferable within other subjects e.g. maths and science. IT also fits with the core concepts of the school's bespoke curriculum built on the science of learning principles of revisiting skills and concepts regularly.	Builds upon the programming learning from previous years but particularly within Y3 from NCCE Programming A Unit Sequencing Sounds and skill introduced in Scratch jnr. Prepares for further programming units in Y4,5,6. Also prepares learning for more problem solving and reasoning within computing and other subjects for example maths. Structure of the NCCE unit is built around the science of learning principles which the school follows, reducing cognitive overload through the four levels of abstraction.	Builds upon the learning in Y1 Digital writing and digital painting units and also the Y2 Digital photography units. Prepares for future years units on sharing information in digital formats e.g. Sharing information. Digital application of literacy skills enables access to all and builds skills for future learning and application in secondary schools and the world of work.

Year 4/5 Cycle A	Y4 Data - Data logging Link to science <i>Consider use of microbits.</i>	Y4 Programming B - Repetition in games	Y4 Creating media – Audio production	Y5 Data - Flat file databases Link to Year 4 History Monarchs	Y5 Programming A – Selection in physical computing Link to History Project: Ancient Greece	Y5 Creating media – Introduction to vector graphics Link to Art Pop Art
Previous learning: Preparing for: Bespoke to the School:	Builds upon previous data units of Branching Databases in Y3, Grouping Data Y1. Also builds upon children's previous science investigation skills and collection of results within changing state unit of the science curriculum. Prepares for future science investigations, maths data handling through graph work and builds into the Y5 and Y6 Data Units. The unit allows excellent cross curricular links with the science coverage in this year group, application of the science of learning principles of revisiting learning and core concepts within science through a digital platform.	Builds upon children previous work in Scratch Jnr in KS1, Scratch in Y3 and Logo within this year. Also builds further upon the loops learnt in Programming A. Prepares for further learning in Scratch and the creation of own algorithms using new blocks / written code. Links to the World of Work. Structure of the NCCE unit is built around the science of learning principles which the school follows, reducing cognitive overload. Follows a PRIM structure and recent relevant research has been used to develop the best pedagogy for the unit.	Builds upon the Y2 Digital Photography unit and the previous understanding of how to present information in a variety of formats. Prepares for future learning about how we can impact images and understand how fake images manipulate. This unit can be used to address safety issues and PHRSE links.	Builds upon Y3 Database work and the knowledge and understanding of why and how information might be stored. Prepares for future presentation of data and links into the skills and ideas in the Y6 unit Introduction to Spreadsheets. The school is addressing low frequent lower levels of vocabulary and this unit introduces / consolidates many of the words needed in future spreadsheet and database work.	Builds upon the previous programming and coding NCCE units developing knowledge and understanding of 'if/then/else' & 'conditions' as well as sequences within their block-based algorithms. Prepares for future programming units in Y6 and beyond in KS3. Links to the World of Work. Structure of the NCCE unit is built around the science of learning principles which the school follows, reducing cognitive overload. Follows a PRIMM structure and recent relevant research has been used to develop the best pedagogy for the unit. Allows science of learning concepts through revisiting History K & U as a context for the outcome Quiz.	Builds upon previous understanding of digital painting within the Y3 unit Creating media. Links to the art curriculum within the Y5 work on Pop Art. Prepares for future art learning using digital platforms and links to the Y6 3S Modelling unit. The school is addressing low frequent lower levels of vocabulary and this unit introduces / develops vocabulary used in digital art.

Year 5/6 Cycle A	Y5 Data - Flat file databases Link to Year 4 History Monarchs	Y5 Programming A - Selection in physical computing Link to History Project: Ancient Greece	Y5 Creating media – Introduction to vector graphics Link to Art Pop Art	Y6 Data and information - Introduction to Spreadsheets Links to the ‘world of work’ – Financial Literacy – The ‘Fiver Challenge’ - HSBC	Y6 Programming B – Sensing movement Links to DT: Coding for windmill/wind turbine design and make project Micro: bit/Crumble	Y6 Creating media - 3D Modelling Links to Art Ceramics focus
Previous learning: Preparing for: Bespoke to the School:	Builds upon Y3 Database work and the knowledge and understanding of why and how information might be stored. Prepares for future presentation of data and links into the skills and ideas in the Y6 unit Introduction to Spreadsheets. The school is addressing low frequent lower levels of vocabulary and this unit introduces / consolidates many of the words needed in future spreadsheet and database work.	Builds upon the previous programming and coding NCCE units developing knowledge and understanding of ‘if/then/else’ & ‘conditions’ as well as sequences within their block-based algorithms. Prepares for future programming units in Y6 and beyond in KS3. Links to the World of Work. Structure of the NCCE unit is built around the science of learning principles which the school follows, reducing cognitive overload. Follows a PRIMM structure and recent relevant research has been used to develop the best pedagogy for the unit. Allows science of learning concepts through revisiting History K & U as a context for the outcome Quiz.	Builds upon previous understanding of digital painting within the Y3 unit Creating media. Links to the art curriculum within the Y5 work on Pop Art. Prepares for future art learning using digital platforms and links to the Y6 3S Modelling unit. The school is addressing low frequent lower levels of vocabulary and this unit introduces / develops vocabulary used in digital art.	Builds upon previous NCCE units Y5 Flat File Databases, Y3 Branching Databases. Prepares for future data and information units in KS3 and KS4 as well as being a transferable skill in the real world. The unit allows excellent cross curricular links within the curriculum and projects in this year group. Application of the science of learning principles of revisiting learning and core concepts within a digital platform are achieved.	Builds upon All previous programming units in KS2 to allow progression of skills in Sequence (Y3) repetition (Y4), Selection (Y5) and Variables (Y6 Programming Unit A). Prepares for future programming and coding Learning within KS3 and KS4 and beyond. Links have been made with the DT curriculum to enable codes to be written to manipulate the pupils DT designs. Follows a PRIM structure and recent relevant research has been used to develop the best pedagogy for the unit. Allows science of learning concepts through revisiting previous concepts.	Builds upon previous NCCE units Y5 Vector Drawing, Y4 Repetition in Shapes. Also reinforces and applies Maths 3D shape vocabulary and directional vocab. Prepares for future Computing learning e.g. Media and Vector Graphics in Y8. Links could be made with the Art curriculum and the Ceramics work from Slavery topics. This would challenge but the scaffolding of the unit would allow the learnt skills to be applied in a relevant context. Fits the Science of learning principles of the school.

[Suggested cross curricular links in blue.](#) Units may be moved within the year but Programming A must be covered BEFORE Programming B.

There will be 3 units that the Year 6 cohort won't cover.